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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,281	01/16/2004	Karl-Ernst Noreikat	095309.53123US	5142
23911	7590	04/25/2006	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			ONEILL, KARIE AMBER	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/758,281

Applicant(s)

NOREIKAT ET AL.

Examiner

Karie O'Neill

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-16-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7 and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Formanski et al. (US 6,939,631 B2).

With respect to Claims 1-2, Formanski et al. discloses a method of operating a fuel cell system having at least one fuel cell whose operating temperature is regulated by a cooling circuit that includes a cooling heat exchanger or a cooling loop (column 1 lines 43-46), said method comprising: detecting an ambient temperature (column 4 lines 45-46); defining operating temperature of the at least one fuel cell as a function of the ambient temperature of the cooling loop, such that waste heat of the at least one fuel cell is removed at a lowest temperature at which such a removal is possible; and said cooling circuit controlling said operating temperature of the at least one fuel cell, to achieve said defined operating temperature (column 10 lines 34-38 and 42-57). He also

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discloses the fuel cell comprising a PEM fuel cell (column 1 lines 9-12) and the fuel cell being operated at three different operating temperatures of 60, 70 and 80°C (column 8 lines 63-64).

With respect to Claims 3-5, 7 and 9, in Figure 1, Formanski discloses, the cooling loop (17) including a radiator (21) and pump (19) arranged in a motor vehicle so that air flows through in order to cool down the liquid coolant of the cooling loop. The flow through the radiator is assisted by an air-circulating fan (27), which can be driven by an electric motor, the cooling power being influenced by the control system (29). See column 3 lines 3-11.

With respect to Claims 6 and 10, Formanski discloses in column 10, the method according to Claim 1, wherein the operating temperature of the at least one fuel cell is defined such that a temperature difference between a cooling medium flowing in the cooling loop and said ambient temperature is maintained at a minimum value that is sufficient to ensure removal of the waste heat generated. The parameter  $Q/ITD$  describes the capacity of the cooling system, which includes the temperature of the cooling medium and the ambient temperature, and from the relationship between them it can be seen that the dependency of the cooling system on the ambient temperature allows for removal of waste heat at the lowest operating temperature possible, 60°C.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Formanski et al. (US 6,939,631 B2) in view of Erdle et al. (US 6,833,206 B2).

Formanski et al. discloses the method of operating a fuel cell system having at least one fuel cell as stated in Claim 1 above, wherein the fuel cell system is operated in a motor vehicle as in Claim 7, but he does not disclose wherein the fuel cell system is operated as an auxiliary power unit (APU).

Erdle et al. discloses in Figure 1 a vehicle with a fuel cell system, and according to the invention the vehicle is also equipped with an APU which comprises a fuel cell (column 2 lines 40-43).

Formanski et al. and Erdle et al. are analogous art because they are from the same field of endeavor, fuel cells. At the time of the invention it would have been obvious to one of ordinary skill in the art to operate the fuel cell system of Formanski et al. as an APU, in the Erdle et al. reference, for the purpose of delivering electric power when the combustion engine is not running because the fuel cell is capable of delivering enough electric power as needed by the APU (Erdle et al. column 2 lines 62-64).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-

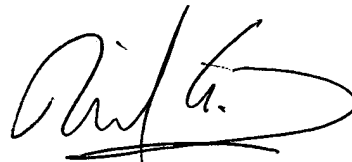
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8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KAO

A handwritten signature in black ink, appearing to read "Michael Barr", with a stylized flourish at the end.

**MICHAEL BARR**  
**SUPERVISORY PATENT EXAMINER**